

REMARKS

The last Office Action has been carefully considered.

It is noted that the claims are rejected under 35 U.S.C. 102(b) over the patent to Tsuzuki.

Also, some claims are rejected under 35 U.S.C. 112.

After carefully considering the Examiner's grounds for the rejection of the claims over the art, applicant has canceled claim 1, amended claims 7 and 11 by making them independent and more clearly defining the present invention.

It is respectfully submitted that the new features of the present invention which are now defined in claims 7 and 11, clearly and patentably distinguishes the present invention from the prior art. Claim 7 specifically defines that the disk has a T-shaped cross-section with a central disk-shaped body and said peripheral flange extending in two opposite axial directions from both outer surfaces of said body provided with a throughgoing opening so as to form two oppositely directed projections.

When the rotary disk is designed in accordance with the present invention, it provides for highly advantageous results. Water which is first supplied to one of the outer surfaces flows along the surface to be atomized, and one projection at the side of this one outer surface prevents an uncontrolled discharge to enhance atomization, while the projection on the opposite outer side of the disk prevents uncontrollable discharge of water from the opposite surface of the disk so as to further enhance atomization.

Turning now to the references and particularly to the patent to Tsuzki it can be seen that this reference the disk is not T-shaped and the projection is provided only on one side of the disk body in association with one outer surface of the disk body. It is therefore believed to be clear that the new features of the present invention which are now defined in claim 7 are not disclosed in this reference and can not be derived from it as a matter of obviousness.

In accordance with another feature of the present invention as defined in now in claim 9, the projection at the side of a liquid supply is shorter than the other projection. This provides for highly advantageous results, especially when the disk body is curved as for example in Figure 3. When water has passed through the openings to the opposite convex outer side of the disk it is easier for the water to discharge from the opposite convex outer surface

without being stopped at the peripheral edge. Therefore the longer projection at the opposite side than at the supply side provides optimal treatment of the water on the corresponding surfaces.

The new features of the present invention as defined in claim 9 are also not disclosed in the prior art and can not be derived from it as a matter of obviousness.

Claim 11 defines an additional feature which is very important for operation of the device. The body of the disk is formed as a one-piece element having a throughgoing opening, and two continuous curved surfaces formed by the opposite surfaces of the disk. When the water flows over the concave side of the disk from the openings toward the periphery, a component of flow is produced which, due to the concave shape of the supply-side surface, provides an action forcing the liquid into the throughgoing openings.

Turning now to the patent to Tsuzki, it can be seen that first of all it deals with a totally different issue and performs totally different functions, namely mixing of water which is supplied by the cone 8 with air which is guided by the flat disk 9 provided with throughgoing openings. If the disk 8 is considered to be a curved disk, it does not have throughgoing openings and therefore it does not anticipate the new features of the present invention as

defined in claim 11. If the disk 9 is considered to be a disk similar to the disk in the applicant's invention, then disk 9, while being provided with throughgoing openings, is not curved. In contrast, in accordance with the present invention as defined in claim 11, the disk has a body which is substantially curved and formed as a one-piece element which continuous convex surface at one side and a continuous concave surface on the opposite side.

The new features of the present invention as defined in claim 11 are not disclosed in this reference and can not be derived from it as a matter of obviousness.

In connection with the Examiner's rejection of the original claims it is believed to be advisable to cite the decision in re Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 221 USPQ 481, 485 (Fed. Cir. 1984) in which it was stated:

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim."

Definitely, the reference does not disclose each and every element of the present invention as defined in claims 7, 9 and 11.

In order to arrive at the applicant's invention as defined in these

claims from the teaching of the reference, the reference has to be fundamentally modified, in particular by providing into it the new features of the present invention which were first proposed by the applicant. However, it is known that in order to arrive at a claimed invention, by modifying the references the cited art must itself contain a suggestion for such a modification.

This principle has been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision in re Randol and Redford (165 USPQ 586) that

Prior patents are references only for what they clearly disclose or suggest; it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest.

Finally, as explained herein above, the present invention provides for the highly advantageous results which can not be accomplished by the construction disclosed in the patent to Tsuzki. It is well known that in order to support a valid rejection the art must also suggest that it would accomplish applicant's results. This was stated by the Patent Office Board of Appeals, in the case Ex parte Tanaka, Marushima and Takahashi (174 USPQ 38), as follows:

Claims are not rejected on the ground that it would be obvious to one of ordinary skill in the art to rewire prior art devices in order to accomplish applicants' result, since there is no suggestion in prior art that such a result could be accomplished by so modifying prior

art devices.

In view of the above presented remarks and amendments, it is believed that claims 7, 9 and 11 should be considered as patentably distinguishing over the art and should be allowed.

As for the other claims, they depend on the corresponding independent claims, they share their presumably allowable features, and therefore it is respectfully submitted that they should be allowed as well.

Reconsideration and allowance of the present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-243-3818).

Respectfully submitted,

Ilya Zborovsky

A handwritten signature in black ink, appearing to be 'Jung', written in a cursive style.

Agent for Applicant  
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